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UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

NATIONAL FOREST FACTS & Figures.

SOUTHWESTERN REGION

ARIZONA AND NEW MEXICO

1943

Need Population
1/ Livestock Summaries for Ariz. & New Mexico
2/ grazable timber & woodland areas.
Total by States
3/ Population estimates of numbers of livestock grazed yearlong in various vegetal cover types.

See page 28

M—5123 U. S. GOVERNMENT PRINTING OFFICE 8—7417

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ORIGIN OF SOUTHWESTERN NATIONAL FORESTS

Dates of Proclamations and Executive Orders Establishing Them	ARIZONA	NAME OF NATIONAL FOREST
	Apache	
August 17, 1898		Black Mesa Forest Reserve
July 1, 1908		Part of the Black Mesa Forest Reserve became the Apache National Forest
(The above covers only the portion of the Apache National Forest in Arizona)		
	Coconino	
August 17, 1898		San Francisco Mountains Forest Reserve
July 2, 1908		All of the San Francisco Mountains Forest Reserve and parts of the Black Mesa, Tonto and Grand Canyon were consolidated under the name of the Coconino National Forest
	Coronado	
November 5, 1906		Baboquivari Forest Reserve
November 6, 1906		Huachuca Forest Reserve
November 7, 1906		Tumacacori Forest Reserve
July 2, 1908		Baboquivari, Huachuca and Tumacacori Forest Reserves consolidated under the name of the Garces National Forest
April 11, 1902		Santa Rita Forest Reserve
July 2, 1902		Santa Catalina Forest Reserve
May 25, 1907		Dragoon National Forest
July 2, 1908		Santa Rita, Santa Catalina and Dragoon National Forests consolidated under the name of the Coronado National Forest
April 17, 1911		Garces and Coronado National Forests consolidated under the name of the Coronado National Forest
July 30, 1902		Chiricahua Forest Reserve
November 5, 1906		Peloncillo Forest Reserve

Dates of Proclamations and Executive Orders Establishing Them	NAME OF NATIONAL FOREST
	Coronado (Continued)
July 2, 1908	Chiricahua and Peloncillo Forest Reserves consolidated under the name of the Chiricahua National Forest. (Portion of the Peloncillo in New Mexico.)
June 6, 1917	Chiricahua and Coronado National Forest consolidated under the name of the Coronado National Forest.
(The above covers the entire Forest situated in Arizona and New Mexico)	
	Crook
July 22, 1902	Mt. Graham Forest Reserve
March 20, 1905	Pinal Mountains Forest Reserve
October 3, 1905	Tonto Forest Reserve
January 13, 1908	Pinal Mountains Forest Reserve became part of the Tonto National Forest
July 1, 1908	Parts of the Mt. Graham and Tonto National Forests, including the Pinal Mountains area, consolidated under the name of the Crook National Forest
January 23, 1925	518,431 acres transferred from Apache National Forest to Crook National Forest.
	Kaibab
February 20, 1893	Grand Canyon Forest Reserve
July 2, 1908	All of the San Francisco Mountains and parts of the Black Mesa, Tonto, and Grand Canyon National Forests consolidated under the name of the Coconino National Forest.
June 28, 1910	Part of the Coconino National Forest together with certain other land not heretofore reserved became the Tusayan National Forest.
May 22, 1908	Dixie National Forest (Arizona)
July 2, 1908	Kaibab National Forest
March 18, 1924	Dixie consolidated with the Kaibab
August 4, 1934	The Tusayan and Kaibab National Forests consolidated

Dates of Proclamations and Executive Orders Establishing Them	NAME OF NATIONAL FOREST
	Prescott
May 10, 1898	Prescott Forest Reserve
December 30, 1907	Verde National Forest
July 2, 1908	Prescott and Verde National Forests consolidated under the name of the Prescott National Forest
October 22, 1934	249,201 acres transferred from Tusayan to Prescott National Forest
	Sitgreaves
July 1, 1908	Parts of the Black Mesa and Tonto National Forests consolidated under the name of the Sitgreaves National Forest
	Tonto
October 3, 1905	Tonto Forest Reserve
October 22, 1934	Bloody Basin transferred from Prescott to Tonto National Forest 151,285 acres
	NEW MEXICO
	Apache
January 23, 1925	A portion of the Datil National Forest was transferred to the Apache National Forest. This portion was originally part of the Magdalena and Gila River Forest Reserves
	Carson
November 7, 1906	Taos Forest Reserve
July 1, 1908	Carson National Forest created by consolidation of the Taos National Forest and part of the Jemez National Forest
June 16, 1923	63,708 acres in Taos County transferred from Santa Fe National Forest to Carson National Forest
	Cibola
October 5, 1906	Mt. Taylor Forest Reserve
November 5, 1906	San Mateo Forest Reserve Magdalena Forest Reserve
November 6, 1906	Manzano Forest Reserve
April 16, 1908	Mt. Taylor National Forest consolidated with the Manzano National Forest

Dates of Proclamations and Executive Orders Establishing Them	NAME OF NATIONAL FOREST
	Cibola (Continued)
June 18, 1908	Creating the Datil National Forest
July 2, 1908	San Mateo National Forest added to the Magdalena National Forest
February 23, 1909	Magdalena and Datil National Forests consolidated
March 2, 1909	Zuni National Forest
September 10, 1914	Zuni National Forest consolidated with the Manzano National Forest
December 3, 1931	Name of the Manzano changed to Cibola National Forest and a portion of the Datil transferred to the Cibola
	Gila
March 2, 1899	Gila River Forest Reserve
February 6, 1907	Big Burros Forest Reserve
June 18, 1908	Consolidating the Big Burros with the Gila National Forest
December 24, 1931	A portion of the Datil was transferred to the Gila National Forest
	Lincoln
July 26, 1902	Lincoln Forest Reserve
November 5, 1906	Gallinas Forest Reserve
April 19, 1907 April 24, 1907	Guadalupe National Forest Sacramento National Forest
July 2, 1908	Guadalupe and Sacramento National Forest consolidated as the Alamo National Forest. The Gallinas and Lincoln National Forest consolidated as the Lincoln National Forest
June 6, 1917 (effective July 1)	The Alamo National Forest transferred to the Lincoln National Forest.

Date of Proclamations and Executive Order Establishing Them	NAME OF NATIONAL FOREST
.. Santa Fe	
January 11, 1892	Pecos River Forest Reserve
October 12, 1905	Jemez Forest Reserve
July 1, 1908	Pecos River National Forest changed to Pecos National Forest
July 1, 1915	Jemez and Pecos National Forests consolidated as the Santa Fe National Forest
October 3, 1905	Portales Forest Reserve
March, 1907	The Portales National Forest restored to the public domain.

Note: The foregoing covers only changes of name and major transfers. There have been many additions, eliminations and chages in boundaries not listed.

Region 3 1943

NATIONAL FOREST IMPROVEMENTS (GOVERNMENT OWNED) ON JUNE 30, 1942

(Includes Southwestern Forest & Range Exp. Station)

ARIZONA

	Fire Control and Administration	Number	Miles	Construction Cost
1.	Fire Control Improvements			$ 79,100
2.	Lookout Houses, Towers & Observatories	69		
3.	Fire Control Water Facilities			
4.	Firebreaks		13	
	Administration Improvements			
5.	Communication Systems			448,865
6.	Telephone Lines		2173	
7.	Dwellings and Related Improvements			795,799
8.	Dwellings	221		
9.	Other Structures	280		
10.	Water & Sanitary Systems	191		
11.	Warehouses, Shops and Offices			429,993
12.	Offices	53		
13.	Shops	11		
14.	Warehouses	213		
	Total	1038	2186	1,753,757
	Public Service			
15.	Recreation Use Improvements			1,015,442
16.	Campgrounds and Picnic Areas	156		
17.	Swimming Areas	4		
18.	Winter Sports Areas	7		
	Total	167		1,015,442
	Wildlife and Range Use Improvements			
19.	Range Use Improvements			2,993,185
20.	Range Fences and Corrals		6324	
21.	Stock Driveways		176	
22.	Range Water Developments	2008		
23.	Artificial Reseeding (Acres)	10		
24.	Wildlife Use Improvements			163,176
25.	Game Refuge Fences		7.8	
26.	Fish Rearing Ponds	15		
27.	Stream and Lake Improvements	39		
	Total	2072	6507.8	3,156,361
28.	Soil and Water Control Improvements			523,658
29.	ROADS		5374	9,291,450
30.	TRAILS		3454	537,685
	Total		8828	9,829,135
	GRAND TOTAL	3277	17521.8	$16,278,353

ARIZONA	RANGER DISTRICTS IN REGION 3	NEW MEXICO	
Apache National Forest	2	Apache National Forest	3
Coconino " "	6	Carson " "	6
Coronado " "	5	Cibola " "	7
Crook " "	6	Coronado " "	1
Kaibab " "	4	Gila " "	7
Prescott " "	6	Lincoln " "	6
Sitgreaves " "	4	Santa Fe " "	7
Tonto " "	8		
	41		37

TOTAL FOR REGION - 78

NATIONAL FOREST IMPROVEMENTS (GOVERNMENT OWNED) ON JUNE 30, 1942

(Includes Southwestern Forest & Range Exp. Station)

	NEW MEXICO			TOTAL R-3		
	Number	Miles	Construction Cost	Number	Miles	Construction Cost
1.			$ 120,787			$ 199,887
2.	53			122		
3.	2			2		
4.		8			21	
5.			635,071			1,083,936
6.		2412			4585	
7.			424,353			1,220,152
8.	138			359		
9.	251			531		
10.	95			286		
11.			251,461			681,454
12.	39			92		
13.	18			29		
14.	111			324		
	707	2420	1,431,672	1745	4606	3,185,429
15.			603,488			1,618,930
16.	112			268		
17.				4		
18.	11			18		
	123		603,488	290		1,618,930
19.			2,224,915			5,218,100
20.		5368			11692	
21.		44			220	
22.	738			2746		
23.	306			316		
24.			82,691			245,867
25.		2.5			10.3	
26.				15		
27.	59			98		
	1103	5414.5	2,307,606	3175	11922.3	5,463,967
28.			519,149			1,042,807
29.		2725	6,651,523		8099	15,942,973
30.		3385	289,498		6839	827,183
		6110	6,941,021		14938	16,770,156
	1933	13944.5	11,802,936	5210	31466.3	28,081,289

Forest and State	A Less Than ¼ A.	B ¼ A. & Less Than 10 A.	C 10 A. & Less Than 100 A.	D 100 A. & Less Than 300 A.	E Over 300 A.	Total	Class C-D-E Obj.	M.C. Fires	M.C. Obj.
ARIZONA									
Apache	95	24	3			122	2	16	10
Coconino	526	105	4			635	1	96	55
Coronado	31	29	9			69	9	10	14
Crook	41	17	4	1	1	64	5	10	7
Kaibab	149	58	1	2	1	211	2	77	39
Prescott	59	21	3	3		86	3	22	24
Sitgreaves	120	55	2			177	3	12	20
Tonto	96	48	16	2	2	164	3	24	8
Total ARIZONA	1117	357	42	8	4	1528	28	267	177
NEW MEXICO									
Apache	45	11	1			57	3	8	10
Carson	21	15			2	38	2	21	14
Cibola	57	18	6			81	6	19	20
Gila	146	41	5		1	193	3	12	14
Lincoln	34	10	5			49	6	13	18
Santa Fe	39	21	2			62	4	16	17
Total NEW MEXICO	342	116	19		3	480	24	89	93
Total REGION 3	1459	473	61	8	7	2008	52	356	270

ACREAGE BURNED 1942

Forest and State	Gross Inside Boundaries	Area Burned Objective
ARIZONA		
Apache	166	160
Coconino	384	600
Coronado	384	1040
Crook	552	350
Kaibab	1603	375
Prescott	209	400
Sitgreaves	193	300
Tonto	1523	300
Total - ARIZONA	5014	3525
NEW MEXICO		
Apache	102	125
Carson	21	150
Cibola	65	300
Gila	964	700
Lincoln	205	500
Santa Fe	34	200
Total - NEW MEXICO	1391	1975
Total - REGION 3	6405	5500

MAJOR ACCOMPLISHMENTS WITH EMERGENCY ORGANIZATIONS

(Not including CCC)

April 1, 1933 to December 31, 1941

Activity	Unit	ARIZONA Const.	ARIZONA Maint.	NEW MEXICO Const.	NEW MEXICO Maint.	R-3 - TOTAL Const.	R-3 - TOTAL Maint.
Truck trails and minor roads	Miles	571	1883	567	4199	1138	6082
Bridges	No.	31	5	41	83	72	88
Horse Trails	Miles	469	479	252	4051	721	4530
Telephone Lines	Miles	162	885	460	3649	622	4534
Fish Stream Imp.	Miles	132	-	202	20	334	20
Range and Other Fences	Miles	1552	446	1581	3188	3133	3634
Water Development	No.	546	45	185	114	731	159
Pipe Lines	Miles	36	8	5	1	41	9
Corrals	No.	11	1	24	8	35	9
Range Surveys	Acres	1498835	-	896999	-	2395834	-
Range Revegetation	Acres	1593	-	519	-	2112	-
Eradication Poisonous Plants	Acres	480	-	931	-	1411	-
Estimating Timber Resources	Acres	500206	-	38500	-	538706	-
Stock Driveways	Miles	16	23	11	98	27	121
Rodent Control	Acres	22986	19680	379889	10432	402875	30112
Timber Stand Imp.	Acres	19787	-	9415	-	29202	-
Tree Disease Control	Acres	12760	7115	6753	836	19513	7951
Tree Insect Control	Acres	13224	6000	2915	-	16139	6000
Dams, Erosion Control	No.	103	5	45	8	148	13
Dams, Imp'd'g., Large Diversion	No.	3	10	5	4	8	14
Recreation Campgrounds	Acres	141	2631	126	666	267	3297
Recreation Structures	No.	175	60	324	725	499	785
Fire Breaks	Miles	28	12	4	-	32	12

MAJOR ACCOMPLISHMENTS WITH EMERGENCY ORGANIZATIONS
(Cont'd)

Activity	Unit	ARIZONA Const.	ARIZONA Maint.	NEW MEXICO Const.	NEW MEXICO Maint.	R-3 TOTAL Const.	R-3 TOTAL Maint.
Admin. Bldgs.	No.	69	74	69	321	138	395
Other Struct. Imps. (Misc.)	No.	103	15	435	162	538	177
Lookout Houses & Towers	No.	11	9	21	11	32	20
Fire Suppression	M-Days	761	-	1039	-	1800	-
Cattle Guards	No.	86	14	75	30	161	44
Signs, Markers and Monuments	No.	242	35	1016	105	1258	140
Erosion Control	Acres	7393	60	7952	-	15345	60
Fire Prevention and Presuppression	M-Days	389	13	729	130	1118	143
Maps and Models	"	111	-	18954	-	19065	-
Marking Boundaries	Miles	56	40	1096	94	1152	134
Surveys, Topographic	Acres	9780	-	86710	-	96490	-

ACCOMPLISHMENTS WITH CCC ORGANIZATIONS
4/1/33 - 7/31/43

Activity	Unit	ARIZONA Const.	ARIZONA Maint.	NEW MEXICO Const.	NEW MEXICO Maint.	R-3 TOTAL Const.	R-3 TOTAL Maint.
Truck Trails and Minor Roads	Mi.	1,848	8,616	1,790	14,445	3,638	23,061
Bridges, vehicle	No.	210	87	244	46	454	133
Horse Trails	Mi.	537	438	273	488	810	926
Telephone Lines	Mi.	1,221	3,043	2,484	5,574	3,705	8,617
Ponds, Fish and Birds	No.	373	195	60	6	433	201
Fish Stream Improvement	Mi.	183	24	223	58	406	82
Range & Other Fences	Mi.	2,521	782	2,215	1,005	4,736	1,787
Water Developments	No.	901	143	483	268	1,384	411
Pipe Lines	Mi.	7,695	2,597	7,900	7	15,595	2,604
Corrals	No.	62	2	49	58	111	60
Range Revegetation	A.	3,916	-	8,174	-	12,090	-
Eradication Poisonous Plants	A.	5,153	-	15,972	1	21,125	1
Estimating Timber Resources	A.	8,325	-	57	-	8,382	-
Stock Driveways Posting And Improvement	Mi.	32	-	4	-	36	-
Rodent Control	A.	1,147,441	-	425,211	-	1,572,652	-
Timber Stand Improvement	A.	45,939	-	33,984	-	79,923	-
Tree Disease Control	A.	64,336	37,084	27,126	4,675	91,462	41,759
Tree Insect Control	A.	21,205	-	10,967	-	32,172	-
Dams, Erosion Control	No.	64,807	22,860	72,226	2,600	137,033	25,460
Recreation Campgrounds	A.	1,106	693	562	918	1,668	1,611
Recreation Structures	No.	4,379	877	2,665	776	7,044	1,653
Fire Breaks	Mi.	28	55	8	3	36	58
Admin. Bldgs. Barns and Dwellings	No.	137	215	70	127	207	342
Admin. Buildings, Small Garages & Other	No.	266	105	382	148	648	253

ACCOMPLISHMENTS WITH CCC ORGANIZATIONS
(Continued)

Activity	Unit	ARIZONA Const.	ARIZONA Maint.	NEW MEXICO Const.	NEW MEXICO Maint.	R-3 TOTAL Const.	R-3 TOTAL Maint.
Lookout Houses & Towers	No.	39	15	32	29	71	44
Fire Suppression	M-D	35,713	-	14,211	-	49,924	-

TOTAL CAMP MONTHS, 4/1/33 - 7/31/43

Arizona	1343.5
New Mexico	1062.5
Total R-3	2406.0

TIMBER DATA

Acreage and percent of commercial sawtimber lands

ARIZONA

Ownership of Commercial Sawtimber Areas

	Commercial°	Percent
National Forests	2,330,000	64.6
Indian Reservations	1,215,000	33.7
Other Federal		
State	28,000	.8
	3,573,000	99.1
Private	34,000	.9
Total	3,607,000	100.0

NEW MEXICO

National Forests	2,421,000	60.3
Indian Reservations	428,000	10.7
Other Federal	10,000	.2
State	119,000	2.9
	2,978,000	74.1
Private	1,040,000	25.9
Total	4,018,000	100.0

VOLUME OF TIMBER IN COMMERCIAL FORESTS°

ARIZONA

Ft. B.M.

National Forests	13,842,000,000	71.0
Indian Reservations	5,500,000,000	28.2
Other Federal State	82,000,000	.4
	19,424,000,000	99.6
Private	68,000,000	.4
Total	19,492,000,000	100.0

NEW MEXICO

National Forests	9,596,000,000	69.4
Indian Reservations	608,000,000	4.4
Other Federal	25,000,000	.2
State	526,000,000	3.9
	10,755,000,000	77.9
Private	3,068,000,000	22.1
Total	13,823,000,000	100.0

°Data from Joint Congressional Report.

Estimate of Sawtimber in M ft. B. M. in Southwest - includes non-commodity and non-commercial*

		Arizona	New Mexico
National Forests		14,489,000	11,253,000
Indian Reservations		5,531,000	566,000
Other Federal Lands		545,000	20,000
State		110,000	521,000
Private		118,000	4,837,000
	TOTAL	20,793,000	17,197,000

Cordwoods in Cords

National Forests		10,894,000	13,448,000
Other		19,000,000	20,000,000
	TOTAL	29,894,000	33,448,000

Area sawtimber type - Arizona 4,774,000 acres or 6.8% of total
" " " New Mexico 6,097,000 acres or 7.7% of total
Woodland forests cover 27.95% of total area of the two states.

Area sawtimber type in National Forests of Arizona - 3,072,000
" " " " " " " New Mexico - 4,010,000

Total area cutover land, sawtimber type, in Arizona, to January 1, 1943
733,300 acres (Estimated)
Total area cutover land, sawtimber type, in New Mexico, to January 1, 1943
1,181,800 acres (Estimated)

National Forests of Region 3 are:
35% Woodland
34% Sawtimber
31% Untimbered
About 73% of gross area of New Mexico Forests belong to the Government.
About 98% of gross area of Arizona Forests belong to the Government.

TIMBER LAND DATA BY PER CENTS - BASED ON AREA
(Includes non-commodity and non-commercial areas)

Arizona		New Mexico	
National Forests	64.9%	National Forests	67.3%
Indian Reservations	30.7	Indian Reservations	5.8
Public Domain	0.4	Public Domain	0.3
National Park	2.3		
Total Federally Owned	98.3%	Total Federally Owned	73.4%
State	0.7	State	2.2
Total Federal & State	99.0%	Total Federal & State	75.6%
Private	1.0	Private	24.4
Grand Total	100.0%	Grand Total	100.0%

*Latest data

M ft. B. M. Fiscal Year 1942

Forest	Commercial Sales	Cost Sales	Exchange	Total Cut	Total	Amount Free Use (M ft.)
Apache	13,195	41		13,236	$ 30,133	311
Coconino	40,159	71		40,230	106,089	1,224
Coronado	1,540	11		1,551	3,409	1,725
Crook	330	20		350	679	227
Kaibab	340	20		360	853	395
Prescott	1,353	13		1,366	3,580	1,124
Sitgreaves	12,921	43		12,964	36,320	714
Tonto	4,957	19		4,976	12,561	855
ARIZONA	74,795	238		75,033	193,624	6,575
Apache	4,661	24		4,685	14,210	423
Carson	2,860	515	34	3,409	6,979	10,952
Cibola	5,668	134	4,068	9,870	22,696	2,742
Coronado						62
Gila	4,402	27		4,429	9,507	846
Lincoln	2,432	27	2,277	4,736	11,553	2,534
Santa Fe	11,940	169	5,983	18,092	37,852	3,029
NEW MEXICO	31,963	896	12,362	45,221	102,797	20,588
REGION 3	106,758	1,134	12,362	120,254	296,421	27,163

Cumulative Increment of Ponderosa Pine In Different Periods after Cutting
(Data collected and compiled by Southwestern Forest and Range Exp. Station)

Residual Volume	Years After Cutting						
	5	10	15	15	20	25	30
Ft. b.m.	Ft. B.M.	Ft. B.M.	Ft. B.M.	Percent	Ft. B.M.	Ft. B.M.	Ft. B.M.
200	50	145	200	7.3	320	420	520
600	100	250	390	4.3	520	670	800
1,000	165	325	495	3.3	680	870	1,030
2,000	260	515	805	2.7	1,090	1,340	1,610
3,000	350	700	1,125	2.5	1,550	1,825	2,230
4,000	460	900	1,410	2.4	1,910	2,430	2,900
5,000	540	1,050	1,640	2.2	2,240	2,800	3,350
6,000	620	1,220	1,850	2.0	2,550	3,250	3,875
7,000	670	1,350	2,070	2.0	2,800	3,550	4,250
8,000	735	1,480	2,250	1.9	3,050	3,950	4,650
9,000	775	1,550	2,400	1.8	3,200	4,050	4,700
10,000	800	1,650	2,500	1.7	3,250	4,000	4,800

(Note: Increment volumes in lower portion of table are subject to considerable error due to too few plots. Volumes beyond 20 years were obtained by extending curve.)

NUMBER OF TREE SPECIES

According to U. S. Department of Agriculture, Misc. Circular No. 92, "Check List of the Forest Trees of the United States" there are 131 species of trees in Region 3.

Of these 131 species four make up 98% of volume of the sawtimber stand. Ponderosa pine (Pinus ponderosa) making up 82% of the volume; Douglas fir (Pseudotsuga taxifolia) making up 10% of the volume; White fir (Abies concolor) making up 3% of the volume; Engelmann spruce (Picea engelmannii) making up 3% of the volume; and Mexican white pine (Pinus strobiformis), Corkbark fir (Abies Arizonica) limber pine (Pinus flexilis), etc., making up the remainder of the volume.

TOTAL CUT SAWTIMBER BY STATES

Data from Census (Calendar Year)
(All Ownerships)

Year	Number Mills Reporting: Arizona	Number Mills Reporting: New Mexico	Total Cut M.F.B.M.: Arizona	Total Cut M.F.B.M.: New Mexico	M. F. B. M. Total Arizona and New Mexico
1926	23	67	115,000	127,000	242,000
1927	26	73	169,000	173,000	342,000
1928	25	77	158,000	162,000	320,000
1929	31	78	175,000	148,000	323,000
1930	26	76	95,000	143,000	238,000
1931	26	57	85,000	58,000	143,000
1932	22	52	58,000	72,000	130,000
1933	28	55	90,000	89,000	179,000
1934	34	74	73,000	101,000	174,000
1935	29	79	98,716	126,220	224,936
1936	36	87	123,411	140,840	264,251
1937	39	105	123,041	164,446	287,487
1938	37	94	118,200	125,176	243,376
1939	42	98	119,206	106,227	225,433
1940	41	100	128,776	112,786	241,562
1941	42	119	130,567	114,612	245,179

The sawtimber forests of Arizona and New Mexico have supplied sawtimber for the production of approximately eight and three quarters billion board feet of sawn products during the period 1879 to 1942 inclusive.

TOTAL CUTS FROM NATIONAL FORESTS

All classes of products converted to M ft. All classes of Forest Sales.

Calendar Year 1942

Year	S-22: Arizona	S-22: New Mexico	Commercial Sales & Exchange: Arizona	Commercial Sales & Exchange: New Mex.	Total Arizona & New Mexico	Average Price per M ft.	Free Use: Arizona	Free Use: New Mexico	Total
1926	379	579	30,761	16,032	46,793	$2.59	7,002	13,980	20,982
1927	334	679	69,896	14,353	84,249	2.65	6,767	10,038	16,805
1928	378	695	93,117	18,854	112,031	2.51	6,590	7,643	14,233
1929	261	595	143,575	33,161	176,736	2.49	7,337	10,614	17,951
1930	269	907	85,476	36,194	121,670	2.33	8,670	15,818	24,488
1931	257	953	80,862	14,865	95,727	2.34	10,342	22,503	32,845
1932	371	827	57,206	10,714	67,920	2.31	12,876	27,962	40,838
1933	284	813	75,998	14,196	90,194	2.38	14,623*	29,255	43,878
1934	508	774	34,944	12,826	47,770	2.35	14,568	23,485	38,053
1935	391	841	78,648	17,398	96,046	2.23	15,395	26,725	42,120
1936	484	936	91,670	34,912	126,582	2.34	13,593	22,253	35,846
1937	572	1,144	91,902	50,631	142,533	2.24	7,902	25,332	33,234
1938	519	1,055	69,334	36,763	106,097	2.19	8,117	25,452	33,569
1939	250	846	65,166	31,934	97,100	2.18	8,381	24,111	32,492
1940	274	964	74,360	40,120	114,480	2.30	8,976	28,674	37,650
1941	222	847	79,079	29,102	108,181	2.45	6,767	29,850	36,617
1942	238	865	74,795	44,325	119,120	2.48	6,575	20,588	27,163

*Previous figures on "Free Use" are calendar year. Subsequent years are fiscal year.

Handled under cooperative agreement (State timber) 5,865 M (C.Y. 1942)
Handled under cooperative agreement (Private timber) 8,770 M (C.Y. 1942)
Handled under timber rights 3,334 M (C.Y. 1942)

COMPARATIVE PAINTABILITY OF DIFFERENT SPECIES OF WOODS

Group No.	Description of group	Species
1	Woods on which paints of types A and B disintegrate slowly	Softwoods Cedars Southern cypress Redwood
2	Woods on which paints of type A disintegrate slowly but those of type B disintegrate somewhat more rapidly than they do on woods of group 1	Softwoods Northern white pine Sugar pine Western (Idaho) White pine
3	Woods on which paints of types A and B disintegrate more rapidly than they do on woods of group 1	Hardwoods Aspen Cottonwoods Yellow poplar Softwoods White fir Hemlock Lodgepole pine Ponderosa pine Engelmann spruce Sitka spruce
4	Woods on which paints of types A and B disintegrate more rapidly than they do on woods of Group 3	Hardwoods Beech Birch Maple Gums Softwoods Douglas fir Norway pine Southern yellow pine Western larch
5	Woods unsuitable for conventional house painting because wood filler is required to fill the pores properly.	All hardwoods with pores larger than those in birch, such as ash, chestnut, elm, Hickory, oak, walnut

NOTE: Paints of type A are those that fail by checking and crumbling such as pure white lead paint; those of type B fail by cracking, curling, and flaking, such as paints containing zinc oxide mixed with other pigments.

COMPARATIVE DECAY RESISTANCE OF HEARTWOOD OF LOCAL AND FREQUENTLY-USED OUTSIDE SPECIES

(Applies only to heartwood, untreated. Sapwood of no species is durable under conditions favoring decay; i.e., in contact with soil, poorly-drained or aerated parts of buildings, bridges, etc.)

Durable Group

Cedars
Junipers
Black Locust
Osage Orange
Redwood
Southern cypress

Nearly as Durable Group

White oaks
Honey locust
Dense Douglas fir
Dense southern pine
Dense larch

High Intermediate Group

Cypress (Cupressus)
Douglas fir (unselected)
Southern pine (unselected)
Larch (unselected)

Low Intermediate Group

Red Oaks
Pines (other than southern)
Spruces
Maple (hard and red)
Ashes
Hemlocks

Nondurable Group

True firs (concolor, alpine, balsam, etc.)
Aspen
Cottonwood
Willows

NOTE: When used under decay-inducing conditions the woods in the last three groups should be treated with an approved preservative and in so treating sapwood all around is preferable.

SOME WOOD UTILIZATION FACTS

All other things being equal, that is, grade for grade:

1. Sapwood of any species is as strong when used as a beam or post and as stiff as the heartwood of that species.

2. Red (heartwood) hickory tool handles are as strong as white (sapwood) handles.

3. Timber cut from dead trees (free from decay) is as strong as that cut from live trees.

4. The harder the wood the higher its nail-holding power but the more easily it splits. Conversely, the softer the wood the lower its nail-holding power but the less easily it splits. Hence, use slimmer and more nails in hardwoods and larger and less nails in softwoods.

5. Good air-seasoned wood and good kiln-dried wood of the same species at the same moisture content are of equal strength.

6. From the principal property standpoints the oaks are classed commercially in two groups - white and red. Thus the three important southwestern species of oak are of approximately equal value and behavior in use.

   Arizona white oak (Q. arizonica)
   Emory oak (Q. emoryi)
   Rocky mountain white oak (Q. utahensis)

7. Sapwood of no species is durable.

8. In untreated condition, with the same proportion of heartwood present, there is no difference in durability of round and split posts but splitting often changes the relative proportion by volume of sapwood and heartwood.

9. Generally the softer a wood the better it takes and holds paint.

10. In repainting buildings use the paint of the same manufacturer as was originally used since coats of paints of different formula usually are not compatible.

11. Uneven coatings on wood cause warping.

12. Of all the lumber called or sold under a commercial or trade name including the words, "white pine," that cut from only the following species is true white pine:

    Northern white pine (P. strobus)
    Western (Idaho) white pine (P. monticola)
    Sugar pine (P. lambertiana)
    Limber pine (P. flexilis)
    Whitebark pine (P. albicaulis)
    Mexican white pine (P. strobiformis)

All others belong to the hard or southern yellow pine group (i.e., longleaf, shortleaf, loblolly, slash, etc.); or to the intermediate, red, or nut group (i.e., Norway, lodgepole, jack, ponderosa, pinon, etc.).

FUEL VALUE OF WOOD

(Local species and typical others for comparison)

Approximate equivalents of one ton (2,000 pounds) of coal in terms of one cord of 128 cubic feet containing 80 cubic feet of solid wood.

One cord of	One and one-half cords of	Two cords of
Oaks	Soft maple	Cedars
Locusts	Sycamore	Cypress (Cupressus)
Hard maple	Mesquite tops	Cottonwoods
Ashes	Douglas fir	Aspen
Hickory	Southern pines	Other pines
Mesquite roots	Hemlocks	
	Larch	

NOTE: Of all American species of wood, mesquite is one of the few in which the root-wood is of higher specific gravity than above-ground wood. It pays to use root-wood for fuel and the grubbing will improve many of our ranges.

Water Yield From Small Typical Mountain Watershed,
Open Forest Cover--Elevation 5,000 to 6,000
Applicable to Central Arizona
(Data from Parker Creek Branch Station)

Year	Season	Rain Inches	Run-off Cubic Feet	Cubic Feet Per Acre	Total rain Before run-off began	Lag in days before run-off began	Percent run-off to rain-fall	Acre-feet per inch of rain
1934	Summer	7.54	220,770	315	5.17	60	1.0	0.7
1934	Winter	19.93	17,959,000	25,700	1.00	1	35.5	21.0
1935	Summer	7.78	25,895	37	3.30	30	0.1	0.08
1935	Winter	16.64	13,683,403	19,600	1.11	15	32.3	19.0

Water measurements recorded by weirs at lower extremity of watershed.

SOIL EROSION IN RELATION TO PLANT COVER

Vegetation Character	Density	Average annual rainfall	Elevation	Slope	Exposure	Soil	Eroded Material cubic feet per acre	Erosion in inches over the area	Length of Record
	Percent	Inches	Feet	Pct.			Cubic Feet	Inches	Years
Deteriorated Chaparral and half-shrubs Heavily grazed in past-lightly grazed for past 3 years.	14 .30% of cover large dense crowned shrubs	17	3,700	35	North	Deep gravelly sandy loam Granitic soil type area	423 per annum Eroded slopes, deep gullies	.11 per year 1.10 in 10 years	5
Deteriorated Chaparral and grass now revegetated. Protected for 3 years	50 About 1/3 large shrubs: Mtn.mahogany: garrya, etc.: 2/3 side oats: ball-grass, hairy grama,; wht.eriogonum	23	5,400	60	South	Rocky clay loam. Quartzite soil-type area	Negligible Old gully through center of area is healing	Negligible	3
Deteriorated Semi-desert shrubs no perennial herbaceous vegetation.	Density varies: annuals only: Winter annuals removed	14		2 to 3	South	Heavy clay soil. Conglomerate clay-gravel soil-type area	Gentle slopes, no gullies, sheet wash at rate of 138 cu.ft.per yr.	.036 per year. About 1 inch in 28 years	1½
	Winter annuals left on ground	14		2 to 3	South		Gentle slopes,no gullies, sheet wash at rate of 81 cu.ft.per.yr.	.021 per yr. About 1 in. in 48 yrs.	1½

WILDLIFE AND RANGE MANAGEMENT

Livestock Actually Grazed Under Permit On National Forests

ARIZONA

C.Y.	Cattle	Horses	Sheep	Goats	Swine	Total	Exempt Stock
1926	227,198	2,539	257,575	1,140	271	488,723	21,551
1927	207,517	2,631	337,786	1,796	268	549,998	21,097
1928	186,277	2,231	286,231	1,766	460	476,965	19,495
1929	181,125	1,951	351,221	1,397	455	536,049	18,631
1930	172,024	1,533	352,368	426	272	526,623	11,073
1931	178,900	1,427	331,329	3,345	196	515,197	10,778
1932	181,388	1,391	262,652	1,786	157	447,374	10,460
1933	185,711	1,312	361,013	0	115	448,151	10,824
1934	188,281	1,018	245,189	10	80	434,648	10,629
1935	181,363	912	252,117	0	55	434,447	10,398
1936	180,046	1,074	270,029	600	50	451,799	11,273
1937	182,421	1,014	242,182	600	42	426,259	11,261
1938	183,396	1,042	223,993	600	45	409,076	11,287
1939	171,778	1,198	199,086	800	45	372,907	10,087
1940	149,896	1,397	155,068	800	45	307,206	9,335
	Cattle and Horses		Sheep and Goats				
*1941	158,377		142,444		30	300,851	8,847
*1942	157,500		143,948		45	301,493	8,523

* C&H and S&G figures combined in present annual grazing report.

WILDLIFE AND RANGE MANAGEMENT

Livestock Actually Grazed Under Permit on National Forests

NEW MEXICO

C.Y.	Cattle	Horses	Sheep	Goats	Swine	Total	Exempt Stock
1926	91,364	3,071	197,931	10,390	180	302,936	13,463
1927	89,909	3,350	220,916	11,696	145	326,016	11,190
1928	81,065	3,446	227,651	10,491	168	322,821	12,167
1929	81,044	3,381	244,509	10,427	134	339,495	11,024
1930	82,049	2,964	225,577	10,526	84	321,200	11,044
1931	86,197	2,651	217,044	9,592	102	315,586	10,374
1932	88,669	2,148	211,156	10,850	104	312,927	11,581
1933	91,747	1,704	191,617	10,225	60	295,353	11,488
1934	92,923	1,548	200,156	8,082	19	302,728	11,467
1935	89,174	1,755	179,410	8,639	15	278,993	7,641
1936	86,636	1,894	189,446	6,988	0	284,964	10,425
1937	86,776	1,841	164,709	6,638	0	259,964	10,473
1938	84,136	1,869	167,524	6,417	0	259,946	10,016
1939	89,120	2,028	168,230	4,969	0	264,347	11,766
1940	89,105	1,720	157,601	5,163	0	252,599	12,373
	Cattle and Horses		Sheep and Goats				
*1941	86,381		168,529		0	254,910	10,818
*1942	87,519		164,952		51	252,522	10,000

*C&H and S&G figures combined in annual grazing reports.

WILDLIFE AND RANGE MANAGEMENT

Estimates Of Game On National Forests

	Year	Fur-Bearing Animals								
		Badger	Beaver	Fox	Mink	Muskrat	Raccoon	Ringtail Cat	Skunk	Weasel
Arizona	1935	4,030	1,020	19,250	60	*	6,450	5,460	48,880	2,550
	1936	4,075	940	21,450	55		6,535	5,775	44,800	2,360
	1937	4,110	930	20,550	70		6,840	6,110	43,200	2,210
	1938	3,640	960	20,370	50		6,950	6,730	42,500	2,090
	1939	3,000	931	20,400	20		6,200	7,200	41,700	2,200
	1940	3,300	957	21,300	300		7,300	8,600	35,500	2,200
	1941	3,200	950	21,600	300		7,500	8,600	34,600	2,700
	1942	3,200	1117	19,860	60	1,500	8,300	7,800	35,600	2,700
New Mex.	1935	2,840	1740	6,880	810	*	1,510	2,100	27,450	1,640
	1936	2,650	1720	6,935	495		1,545	2,000	28,365	1,630
	1937	2,710	1770	6,990			1,700	1,850	29,480	1,680
	1938	2,940	1810	6,810	410		1,760	2,120	28,430	4,240
	1939	3,090	1860	6,900	400		1,700	2,250	27,000	4,200
	1940	3,400	2322	6,700	300		1,800	2,500	35,300	3,000
	1941	3,400	2522	6,900	500		1,800	2,700	28,100	6,300
	1942	3,310	2770	7,200	500	1,830	1,800	2,600	27,200	6,200
Total Region 3	1935	6,870	2760	26,130	870	*	7,960	7,560	74,330	4,190
	1936	6,725	2660	28,385	550		8,080	7,775	73,165	3,990
	1937	6,820	2700	27,540	600		8,540	7,860	72,680	3,890
	1938	6,580	2770	27,180	460		8,710	8,850	70,930	6,330
	1939	6,090	2791	27,300	430		7,900	9,450	68,700	6,400
	1940	6,700	3279	28,000	600		9,100	11,100	70,800	5,200
	1941	6,600	3472	28,500	800		9,300	11,300	62,700	9,000
	1942	6,510	3887	27,060	560	3,330	10,100	10,400	62,800	8,900

*Data not available.

WILDLIFE AND RANGE MANAGEMENT

Estimates Of Game On National Forests

Game Animals

	Year	Antelope	Bear: Black or Brown	Bear: Silver Tip or Grizzly	Deer	Elk	Mtn. Sheep	Peccary or Javalina	Squirrel	Turkey
Arizona	1935	5410	775	6	80,170	4810	190	5,200	50,550	9,490
	1936	5040	820	-	81,090	4605	175	5,405	54,810	10,290
	1937	5490	840	-	73,980	4400	200	5,810	57,900	10,620
	1938	5320	865	1	70,020	4140	210	6,140	43,590	9,990
	1939	5100	860	1	67,780	4290	220	7,100	25,400	8,990
	1940	5400	970	-	62,500	4340	215	*	*	8,370
	1941	5900	950	-	61,700	4300	210	7,100	298,330	8,760
	1942	5500	1020	-	64,995	4100	200	8,400	*	9,400
New Mex.	1935	1080	1320	19	90,520	900	105	-	37,850	14,790
	1936	1040	1350	5	86,460	855	115	-	40,450	14,400
	1937	1180	1320	4	76,400	880	55	400	38,400	12,500
	1938	1460	1330	3	72,200	965	90	300	38,800	13,120
	1939	1550	1324	2	69,130	1040	70	400	36,500	12,350
	1940	1700	1430	2	69,300	1060	55	*	*	11,100
	1941	2100	1400	2	68,800	1200	60	400	340,500	10,810
	1942	2300	1342	-	68,100	1300	60	500	*	11,000
Total Region 3	1935	6490	2095	25	170,690	5710	295	5,200	88,400	24,280
	1936	6080	2170	5	167,550	5460	290	5,405	95,260	24,690
	1937	6670	2160	4	150,380	5280	255	6,210	96,300	23,120
	1938	6780	2195	4	142,220	5105	300	6,440	82,390	23,110
	1939	6650	2184	3	136,910	5330	290	7,500	61,900	21,340
	1940	7100	2400	2	131,800	5400	270	*	*	19,470
	1941	8000	2350	2	130,500	5500	270	7,500	638,830	19,570
	1942	7800	2362	-	133,095	5400	260	8,900	*	20,400

*Data not available

WILDLIFE AND RANGE MANAGEMENT
Estimates of Game On National Forests

	Year	Predatory Animals: Wild Cat or Lynx	Coyotes	Lions	Wolf	Wild Dogs
Arizona	1935	13,370	20,140	530	30	*
	1936	12,860	20,850	513	10	*
	1937	12,340	20,560	490	12	*
	1938	11,560	21,530	500	25	25
	1939	10,090	17,875	460	22	13
	1940	10,000	21,900	480	13	20
	1941	11,580	23,500	490	15	20
	1942	10,870	28,500	455	21	*
New Mexico	1935	6,230	11,430	430	45	*
	1936	6,345	11,325	420	24	12
	1937	6,680	12,040	375	16	6
	1938	6,690	12,040	375	30	20
	1939	7,980	14,050	442	22	38
	1940	6,700	11,500	383	18	24
	1941	6,590	12,180	342	24	30
	1942	10,440	13,100	307	11	*

	Year	Game Animals Killed by Man: Antelope	Bear Black or Brown	Deer	Elk	Peccary or Javalina	Squirrel	Wild Turkey
Arizona	1935	55	75	3,870	144	5	280	915
	1936	20	85	3,330	100	25	455	755
	1937	-	107	3,195	66	10	455	660
	1938	-	44	3,045	81	*	215	600
	1939	6	74	2,750	82	*	260	512
	1940	3	97	2,943	91	*	200	510
	1941	294	71	3,240	152	*	170	715
	1942	165	56	3,340	279	120	*	510
New Mexico	1935	5	95	2,080	9	*	1130	1075
	1936	50	75	2,005	15	*	1840	830
	1937	-	94	2,315	11	*	3840	832
	1938	70	96	2,545	10	*	2720	945
	1939	46	96	3,042	19	*	2200	646
	1940	55	100	4,050	25	*	2600	560
	1941	122	97	4,403	31	*	2350	629
	1942	123	54	3,428	51	10	*	370
Total Region 3	1935	60	170	4,950	153	5	1410	1990
	1936	70	160	5,335	115	25	2295	1585
	1937	-	201	5,110	77	35	4295	1492
	1938	70	145	5,510	91	*	2935	1545
	1939	52	170	5,792	101	*	2460	1158
	1940	58	197	6,993	116	*	2800	1070
	1941	416	168	7,643	183	*	2520	1344
	1942	288	110	6,768	330	130	*	880

*Data Not Available

WILDLIFE AND RANGE MANAGEMENT

Game Animals Killed By Predatory Animals

	Year	Antelope	Deer	Elk	Peccary or Javelina	Mountain Sheep	Squirrel	Turkey
Arizona	1935	330	13,440	15	165	10	6710	2895
	1936	245	11,430	50	290	10	10290	2730
	1937	310	10,060	25	795	10	10100	2575
	1938	275	11,135	40	-	10	2690	1640
	1939	280	11,065	100	-	21	3900	2000
	1940	460	10,800	115	*	15	*	*
	1941	462	9,100	235	*	18	*	*
	1942	*	*	*	*	*	*	*
New Mexico	1935	125	11,010	15			3540	3130
	1936	125	10,730	15		15	5900	2905
	1937	120	7,155	15	10	5	3685	3250
	1938	145	6,945	20		10	4300	3120
	1939	175	6,590	17		10	4200	3200
	1940	105	6,400	55	*	15	*	*
	1941	175	6,500	55	*	8	*	*
	1942	*	*	*	*	*	*	*
Total Region 3	1935	455	24,450	30	165	10	10250	6025
	1936	370	22,160	65	290	25	16190	5635
	1937	430	17,215	40	805	15	13845	5825
	1938	420	18,080	60	-	20	6990	4760
	1939	455	17,655	117	-	31	8100	5200
	1940	565	17,200	170	*	30	*	*
	1941	637	15,600	290	*	26	*	*
	1942	*	*	*	*	*	*	*

Predatory Animals Killed

	Year	Wild Cat or Lynx	Coyotes	Wild Dog	Lion	Wolf	Number of Hunters
Arizona	1935	1985	3245		121	12	15,690
	1936	2395	4735		160	7	13,395
	1937	1655	4485		160	10	15,120
	1938	1400	4500		135	9	13,760
	1939	*					17,900
	1940	809	3146		153	4	34,845
	1941	894	3596		86	1	*
	1942	*	*		*	*	*
New Mexico	1935	675	1315		169	1	7,185
	1936	910	1595	3	105	4	7,740
	1937	1260	2005		65	17	11,266
	1938	1200	2230		95	18	11,330
	1939	*					13,850
	1940	1479	4668		221	7	17,455
	1941	503	1580		67	3	*
	1942	*	*		*	*	*

*Data not available.

RANGE FORAGE EQUIVALENTS

Average Grazing Capacities Per Cow Yearlong

Santa Rita Experimental Range - Semi-desert Mixed Grass Type

Well grassed foothill areas - density .40 -24 surface acres
Mesa type areas - - - - - - - density .25 -32 surface acres

Jornada Experimental Range - Black Grama and Tobosa Types

	Density	Acres per cow per year
1. Grasslands (more than 60%)		
a. Black grama (70%) best grass	.25	30
b. Black Grama - cropseeds - 3-awn	.20	40
c. Dropseeds 3-awn - grama - tobosa	.25	45
d. Tobosa - burro grass - alkali sacaton	.35	35
2. Brush types (more than 95%)		
a. Mesquite sandhills (mesquite - chamiza - snakeweed - sand sage - yucca - weeds)	.15	135
b. Blackbrush - creosote bush - mixed grasses	.10	150
3. Foothills and mountains		
a. Lower foothills (grama grasses and mixed brush)	.20	80
b. Pinon - juniper - mountain mahogany - mixed brush and grasses	.25	70

Rodent Equivalents

One thousand to twelve hundred kangaroo rats consume and waste sufficient forage to carry one cow yearlong.

Fifty jack rabbits consume and waste sufficient forage to carry one cow yearlong.

Area Available for Livestock

	Arizona	New Mexico	Total
Total Land Area	72,838,400	78,401,920	151,240,320
Barren and Unaccessible	8,396,803	1,266,940	9,663,743
Other Non-grazable	1,853,855	3,059,800	4,913,655
Total Non-grazable	10,250,658	4,326,740	14,577,398
Total Gross Grazable	62,587,742	74,075,180	136,662,922
Closed to Grazing	782,169	270,658	1,052,827
Total Net Area Available for Livestock - Acres	61,805,573	73,804,522	135,610,095
Percent	84.9	94.1	89.5

GOVERNMENT OWNED WILDLIFE AND RANGE USE IMPROVEMENTS - JUNE 30, 1942

ARIZONA

Forest	Range Use Improvements: Fences & Corrals Miles	Stock Driveways Miles	Water Developments Number	Artificial Reseeding Acres	Cost	Wildlife Use Improvements: Game Refuge Fences Miles	Fish Rearing Ponds Number	Stream & Lake Imp. Number	Cost
Apache	429	45	75	-	$ 163,999	3.5	5	16	$ 59,991
Coconino	1004	-	273	-	415,666	-	-	7	40,081
Coronado	1232	-	506	-	575,559	-	-	1	15,328
Crook	743	-	299	-	450,709	-	-	8	18,041
Kaibab	587	5.5	198	-	343,781	-	-	1	3,670
Prescott	901	7.5	235	-	486,022	4.3	-	-	3,844
Sitgreaves	403	-	58	-	149,629	-	10	1	4,717
Tonto	904	118	310	10	323,746	-	-	5	17,504
Total Forests	6203	176	1954	10	2,909,111	7.8	15	39	163,176
Swn. Forest & Range Exp. Sta.	121	-	54	-	84,074	-	-	-	-
GRAND TOTAL Ariz.	6324	176	2008	10	2,993,185	7.8	15	39	$ 163,176

GOVERNMENT OWNED WILDLIFE AND RANGE USE IMPROVEMENTS - JUNE, 30, 1942

NEW MEXICO

Forest	Range Use Improvements: Fences & Corrals Miles	Stock Driveways Miles	Water Developments Number	Artificial Reseeding Acres	Cost	Wildlife Use Improvements: Game Refuge Fences Miles	Fish Rearing Ponds Number	Stream & Lake Imp. Number	Cost
Apache	566	-	66	-	$ 207,620	-	-	-	-
Carson	444	-	95	-	192,028	-	-	12	$ 25,193
Cibola	1354	-	151	-	469,134	-	-	3	11,628
Coronado	69	-	41	-	28,069	-	-	-	-
Gila	1294	-	196	261	584,089	2.5	-	12	14,208
Lincoln	923	-	157	45	493,904	-	-	1	7,591
Santa Fe	586	44	25	-	192,277	-	-	31	24,071
Total Forests	5236	44	731	306	2,167,121	2.5	-	59	82,691
Swn. Forest & Range Exp. Sta.	132	-	7	-	57,794	-	-	-	-
TOTAL-N. MEX. Region 3	5368	44	738	306	2,224,915	2.5	-	59	82,691
Total Forests	11439	220	2685	316	5,076,232	10.3	15	98	245,867
Total-Swn. For. & Range Exp. Sta.	253	-	61	-	141,868	-	-	-	-
GRAND TOTAL R-3	11692	220	2746	316	5,218,100	10.3	15	98	245,867

Distribution of Lands in Arizona	Area Acres	% To Total Area of State	% To Total Area of Region 3
Federal			
Indian Reservations	22,237,608	30.53	14.70
Grazing Districts and Public Domain	13,144,912	17.95	8.69
National Parks and National Monuments	1,028,899	1.51	.79
Santa Rita Experimental Range	51,893	.07	.03
Southwestern Forest and Range Experiment Station	245	-	-
Military Reservations*	67,737	.09	.04
National Forests (net)**	11,413,370	15.67	7.54
Other Miscellaneous-Including power withdrawals, etc.	3,457,544	4.75	2.24
Total Federally Owned or Managed	51,402,208	70.57	33.94
State			
Total State Owned	8,356,497	11.47	5.53
Private			
Private in farms and ranches	10,501,768	14.43	6.95
Private - other	2,577,927	3.53	1.69
Total Privately Owned	13,079,695		
Total Area of State	72,838,400	100.00	48.11
Distribution of Lands in New Mexico			
Federal			
Indian Reservations	5,851,804	7.50	3.88
Grazing Districts and Public Domain	14,718,641	18.50	9.75
National Parks and National Monuments	251,737	.32	.16
Jornada Experimental Range	189,940	.24	.12
National Forests (net) **	8,575,183	10.96	5.67
Other-Miscellaneous-Including power withdrawals, etc.	1,777,731	2.28	1.17
Total Federally Owned or Managed	31,365,036	39.80	20.75
State			
Total State Owned	12,700,968	16.40	8.40
Private			
Private in Farms and Ranches	30,858,034	39.40	20.42
Private - other	3,477,882	4.40	2.32
Total Privately Owned	34,335,916		
Total Area of State	78,401,920	100.00	51.89
Total Area of Region 3	151,240,320		

* Exclusive of area now within the forest
** Latest available figures

The net forest area in Arizona and New Mexico totals:	19,988,553	Acres
The gross forest area in Arizona	12,105,614	"
The gross forest area in New Mexico	9,885,192	"
Total	21,990,806	

ARIZONA (Cont'd)

Crook

Picnic Grounds (9)

Marijilda
Noon Creek
Web Canyon
Turkey Flat
Pioneer Pass
Kellner Canyon
Pinal Mountain
Warnica Springs
Oak Flat

Forest Camps (12)

Stray Horse
Engineer Spring
Upper Juan Miller
Lower Juan Miller
Honeymoon
Granville
Stockton Pass
Arcadia
Shannon
Hospital Flat
Soldier Creek
Jones Water

Kaibab

Picnic Grounds (5)

Garland Prairie
White Horse
Sycamore
Lava Cave
The Rocks

Forest Camps (6)

Parks
Spitz Spring
Old Bill Williams
J. D. Dam
Jacob Lake
V. T.

Vistas (4)

Garland Prairie
Sycamore
House Rock
Kanab

Kaibab (Continued)

Winter Sports Areas (1)

Williams East

Prescott

Picnic Grounds (5)

Granite Basin*
Thumb Butte
The Playgrounds
Potato Patch
Turney Gulch

Forest Camps (8)

Granite Basin*
Granite Creek
Indian Creek
Wolf Creek
Mingus Mountain
Powell Springs
Hazelett Hollow
Kentuck Spring

Vistas (2)

Granite Basin
Caldwell Canyon

Winter Sports Areas (2)

Mingus Mountain
Indian Creek

Sitgreaves

Picnic Grounds (1)

Promontory

Forest camps (3)

Chevalon
Lakeside
Pinetop

Vistas (1)

Promontory Tower

Winter Sports Areas (1)
Springer Mountain

ARIZONA (Cont'd)

Tonto

Picnic Grounds (6)

Cave Creek
Seven Springs
Camp Creek
Coon Bluff
Blue Point
Canyon Lake

Forest Camps (8)

Broncho Canyon
Blue Point
Apache Lake
Pine
Sycamore
Horton-Tonto Creek
Reynolds Creek
Rose Creek

Total Developed Areas

Arizona

Picnic Grounds	- 38
Forect Camps	- 91
Winter Sports	- 6
Vistas	- 12
	147

NEW MEXICO

Apache

Picnic Grounds (1)

Pueblo Park

Forest Camps (1)

Cottonwood Canyon

Vistas (1)

Chimney Rock

Carson

Picnic Grounds (3)

The Cave
El Rito *
Echo Cave

Forest Camps (22)

El Nogal
La Viniteria
Las Petaca
Capulin
La Sombra
Comales
Agua Piedra

Carson (Cont'd)

Forest Camps

La Junta
Angostura
Santa Barbara
Hondo Canyon
Cabresto Lake
Eagle Rock
Columbine
Goat Hill
La Bobita
Elephant Rock
June Bug
Lagunitas
La Jara
El Rito*
Canjilon

Winter Sports Areas (3)

Agua Piedra
Red River
El Rito

Cibola

Picnic Grounds (24)

Juan Tabo
La Cueva
Cole Spring
Cienega Canyon
Sulphur Canyon
Doc Long
Tree Spring
Dry Camp
Balsam Glade
Capulin
Sandia Crest
Kiwanis Point
Las Huertas Creek
Pine Flat
Cedro Peak
Tajique
New Canyon
Canyon Colorado*
Mountainair Ranger Station
Springtime*
Luna Park
Water Canyon*
McGaffey
Whitewater

Cibola (Cont'd)

Forest Camps (10)

Fourth of July Spring
Capillo Peak
Canyon Colorado*
Springtime*
Water Canyon*
Bear Trap
Hughes Mill
Lobo
Quaking Aspen
Turkey Spring

Winter Sports Areas (2)

Sandia Mountain
McGaffey

Vistas (3)

Sandia Crest
Kiwanis Point
Capillo Peak

Gila

Picnic Grounds (5)

Little Walnut
Cherry Creek
McMillen
Pine Flat
Bursum

Vistas (2)

Emory Pass
Negrito Tower

Forest Camps (12)

Goforth
Iron Creek
Wrights Cabin
Rocky Canyon
Black Canyon
Gilita
Willow Creek
Ben Lilly
Upper Whitewater
Whitewater
Little Dry
Big Dry

NEW MEXICO (Cont'd)

Santa Fe

Picnic Grounds (7)

Paliza*
Banco Bonito
Spence Spring
Little Tesuque
Dalton
E. V. Long
Brides

Forest Camps (21)

Battleship Rock
Jemez River
La Cueva
Calaveras
Rio las Vacas
East Fork
Jemez Falls
Las Conchas
Paliza*
Black Canyon
Fields Tract
Holy Ghost
Winsor Creek
Panchuela
Oak Flat
Brides
Fishing Hole
The Pine
Three Falls
Puerco
Mud Springs

Winter Sports Area (2)

Big Tesuque
Sawyer Mesa

Lincoln

Picnic Grounds (3)

Sitting Bull Falls
Cedar Creek
Red Cloud

Winter Sports Areas (1)

Cedar Creek

Lincoln (Cont'd)

Forest Camps (5)

James Canyon
Karr Canyon
Cherokee Bill
School House
Pine

Jornada Range Reserve

Picnic Grounds (1)

Rope Springs

TOTAL DEVELOPED AREAS

NEW MEXICO

Picnic Grounds	- 44
Forest Camps	- 71
Winter Sports	- 9
Vistas	- 6
	130

TOTAL DEVELOPED AREAS

REGION 3

Picnic Grounds	- 82
Forest Camps	- 162
Winter Sports	- 14
Vistas	- 18
	276

RECREATION VISITORS - 1942

(Estimates cover government owned lands only)

Recreation Areas	Arizona	New Mexico	Region 3
Campgrounds	75,149	24,718	99,867
Picnic Areas	150,345	127,407	277,752
Winter Sports Areas	13,525	18,641	32,166
Organization Camps	8,275	5,960	14,235
Hotels and Resorts	33,023	2,345	35,368
Recreation Residences	6,790	3,101	9,891
Wilderness Areas	1,104	4,372	5,476
Other Forest Areas	134,342	95,483	229,825
Highways and Roads	465,799	121,810	587,609
Totals	888,352	403,837	1,292,189

WILDERNESS AREAS

Arizona

Forest	Name of Area	Acreage: National Forest	Acreage: Other	Logging	Grazing	Final Approval
Apache (Crook)	Blue Range	216,737	1,427	Deferred	To Capacity	8-20-36
Tonto	Mazatzal	205,000	346	Limited	Conservative	6-13-40
Tonto (Crook)	Superstition	131,754	66	Limited	Conservative	4-17-40

New Mexico

Gila	Black Range	168,424	1,560	Discouraged	Conservative	8-29-36
Gila	Gila	566,474	5,730	Inaccesible	Continued	4-4-38
Santa Fe	Pecos Division	136,640	1,360	Discouraged	To continue	8-22-36

WILD AREAS

Arizona

Apache	Mt. Baldy	7,400		Inaccessible	Continued	8-20-36
Coconino Kaibab and Prescott	Sycamore Canyon	46,122	1,108	None	Continued	8-20-36
Coronado	Chiricahua	18,000		Discouraged	Conservative	9-18-40
Crook	Galiuro	54,000		Discouraged	Reserve Range	6-19-40
Prescott (Tonto)	Pine Mountain	17,424	76	None	To decrease	8-22-36
Tonto	Sierra Ancha	33,934	66	Discouraged	Conservative	2-28-33

New Mexico

Lincoln	White Mountain	22,800	1,200	Discouraged	Conservative	8-20-36
Santa Fe	San Pedro Parks	41,132		Not contemplated	Continued	9-16-40

EXPERIMENTAL FORESTS

Arizona

Forest	Name of Area	Acreage: National Forest	Acreage: Other	Logging	Grazing	Final Approval
Coconino Kaibab	Fort Valley	4,770	-	Limited	None	1-28-36
Coconino	Long Valley	2,536	15	Limited	Capacity	3-31-36
Crook	Mt. Graham	3,040	-	Limited	Continued	3-23-32
Tonto	Sierra Ancha	13,255	-	None	Continued*	4-6-38

New Mexico

Forest	Name of Area	Acreage: National Forest	Acreage: Other	Logging	Grazing	Final Approval
Lincoln	Cloudcroft	2,120	-	Limited	None	11-30-35

NATURAL AREAS

Arizona

Forest	Name of Area	Acreage: National Forest	Acreage: Other	Logging	Grazing	Final Approval
Coconino	Oak Creek Canyon	940	-	None	None	10-15-31
Coconino	San Francisco Pks.	880	-	None	Conservative	10-15-31
Coronado	Butterfly Peak	1,000	-	None	Conservative	7-25-35
Coronado	Chiminea Canyon	160	-	None	Conservative	2-26-31
Coronado	Pole Bridge Canyon	320	-	None	Continued	2-26-31
Coronado	Santa Catalina	4,464	-	None	None	3-23-27

New Mexico

Forest	Name of Area	Acreage: National Forest	Acreage: Other	Logging	Grazing	Final Approval
Santa Fe	Monument Canyon	640	-	None	None	10-1-32

RESEARCH AREA

New Mexico

Forest	Name of Area	Acreage: National Forest	Acreage: Other	Logging	Grazing	Final Approval
Santa Fe	Univ. of New Mex.	10,000	-	Regular		5-29-30

*Parker Creek Area Closed

ENGINEERING
ROADS AND TRAILS
To end of Fiscal Year, June 30, 1942

During Fiscal Year 1942 — ARIZONA

Type of Road	Construction Miles	Construction Cost	Maintenance Miles	Maintenance Cost	TOTAL
Forest Highways	*32	$ 169,754	217	$ 10,296	$ 180,050
Forest Development Roads	**53	124,509	7,082	94,126	218,635
Trails	7	4,325	4,376	15,990	20,315
TOTAL		298,588		120,412	$ 419,000

*Const. 2, Betterment 30
** " 14, " 39

To June 30, 1942

Forest Highways	624	10,013,224		386,828	10,400,052
Forest Development Roads	3,561	10,047,881		1,559,922	11,607,803
Trails	3,197	522,168		333,273	855,441
TOTAL		20,583,273		2,280,023	22,863,296

During Fiscal Year 1942 — NEW MEXICO

Forest Highways	*13	155,464	8	5,218	160,682
Forest Development Roads	**28	152,433	2,650	128,802	281,235
Trails	2	249	3,458	10,308	10,557
TOTAL		308,146		144,328	452,474

*Const. 2, Betterment 11
** " 18, " 10

To June 30, 1942

Forest Highways	326	6,958,538		505,202	7,463,740
Forest Development Roads	2,380	7,273,910		1,682,908	8,956,818
Trails	1,990	252,784		246,439	499,223
TOTAL		14,485,232		2,434,549	16,919,781

During Fiscal Year 1942 — REGION

Forest Highways	*45	325,218	225	15,514	340,732
Forest Development Roads	**81	276,942	9,732	222,928	499,870
Trails	9	4,574	7,834	26,298	30,872
TOTAL		606,734		264,740	871,474

* Const. 4, Betterment 41
** " 32, " 49

To June 30, 1942

Forest Highways	950	16,971,762		892,030	17,863,792
Forest Development Roads	5,941	17,321,791		3,242,830	20,564,621
Trails	5,187	774,952		579,712	1,354,664
TOTAL		35,068,505		4,714,572	39,783,077

NET RECEIPTS FOR THE FISCAL YEAR, 1942

State	TIMBER		Grazing	Land Use	Power	Total
	Timber Sales	Forest Products				
Arizona	$180,947.18	784.09	$174,811.31	$16,840.30	$8,053.27	$381,436.15
New Mexico	72,297.57	435.31	97,818.77	8,883.71	-	179,435.36
Region 3	$253,244.75	$1219.40	$272,630.08	$25,724.01	$8,053.27	$560,871.51

Due School Fund (Enabling Act June 20, 1910)

Arizona	$ 22,634.79
New Mexico	197.64

	Arizona	New Mexico
Net amounts on which 25% and 10% are computed	$ 358,544.16	$ 179,116.70
Due States: 25%	89,636.04	44,779.17
Due Road and Trail Fund: 10%	35,854.42	17,911.67
TOTAL	$ 125,490.46	$ 62,690.84

Value of timber delivered in exchange for land under the Act of March 20, 1922, less value previously delivered in cases rejected during the year: $11,958.00

Region 3 — STATE OF ARIZONA — 1943

NATIONAL FOREST AREAS BY COUNTIES

("Net" or Actual National Forest Lands)

June 30, 1942

Forest	County	Net Forest Area-Acres	Amount Paid Under Act June 20, 1910	Amount Paid Under Act May 23, 1908
Apache	Apache	442,621		$ 3,622.13
	Greenlee	236,811		1,937.91
	Total	679,432	$ 1,404.01	5,560.04
Coconino	Coconino	1,318,482		24,535.31
	Yavapai	426,370		7,934.22
	Total	1,744,852	8,199.17	32,469.53
Coronado	Cochise	482,083		3,315.28
	Pima	384,998		2,647.63
	Pinal	24,694		169.82
	Santa Cruz	425,365		2,925.23
	Total	1,317,140	2,287.31	9,057.96
Crook	Cochise	22,400		104.55
	Gila	340,420		1,588.91
	Graham	397,275		1,854.28
	Greenlee	512,118		2,390.32
	Maricopa	10,866		50.72
	Pinal	139,657		651.85
	Total	1,422,736	1,676.89	6,640.63
Kaibab	Coconino	1,729,197		5,153.86
	Mohave	28,059		83.63
	Yavapai	16,233		48.38
	Total	1,773,489	1,334.78	5,285.87
Prescott	Coconino	43,252		224.94
	Yavapai	1,222,267		6,356.62
	Total	1,265,519	1,661.97	6,581.56
Sitgreaves	Apache	44,210		684.01
	Coconino	287,325		4,445.43
	Navajo	471,311		7,292.03
	Total	802,846	3,136.65	12,421.47
Tonto	Gila	1,335,693		6,438.11
	Maricopa	680,935		3,282.14
	Pinal	59,028		284.52
	Yavapai	334,894		1,614.21
	Total	2,410,550	2,934.01	11,618.98
Total for Arizona		11,416,564	$ 22,634.79	$ 89,636.04

Distribution by Counties of the 25% Fund (Last Column)

Apache	$ 4,306.14	Greenlee	$ 4,328.23	Pinal	$ 1,106.19
Cochise	3,419.83	Maricopa	3,332.86	Santa Cruz	2,925.23
Coconino	34,359.54	Mohave	83.63	Yavapai	15,953.43
Gila	8,027.02	Navajo	7,292.03		
Graham	1,854.28	Pima	2,647.63	Total	$ 89,636.04

Region 3 — 1943

STATE OF NEW MEXICO
NATIONAL FOREST AREAS BY COUNTIES
("Net" or Actual National Forest Lands)
June 30, 1942

Forest	County	Net Forest Area-Acres	Amount Paid Under Act June 20, 1910	Amount Paid Under Act May 23, 1908
Apache	Catron	889,698	$ 34.12	$ 7,731.82
Carson	Colfax	6,293		29.09
	Mora	2,496		11.54
	Rio Arriba	777,472		3,593.90
	Taos	321,903		1,488.01
	Total	1,108,164	22.61	5,122.54
Cibola	Bernalillo	81,100		444.44
	Catron	203,511		1,115.28
	McKinley	114,676		628.45
	Sandoval	37,940		207.92
	Sierra	20,766		113.80
	Socorro	921,428		5,049.62
	Torrance	169,845		930.79
	Valencia	89,066		488.10
	Total	1,638,332	39.63	8,978.40
Coronado	Hidalgo	124,988	4.03	912.79
Gila	Catron	1,141,545		4,162.71
	Grant	885,048		3,227.38
	Hidalgo	7,653		27.91
	Sierra	359,536		1,311.07
	Total	2,393,782	38.53	8,729.07
Lincoln	Chavez	40,458		196.62
	Eddy	134,739		654.80
	Lincoln	440,697		2,141.67
	Otero	463,411		2,252.05
	Socorro	1,866		9.07
	Torrance	90,598		440.28
	Total	1,171,769	25.13	5,694.49
Santa Fe	Mora	89,189		542.20
	Rio Arriba	412,392		2,507.06
	Sandoval	274,789		1,670.52
	San Miguel	293,895		1,786.67
	Santa Fe	179,615		1,091.93
	Taos	1,921		11.68
	Total	1,251,801	33.59	7,610.06
Total for New Mexico		8,578,534	$ 197.64	$44,779.17

Distribution by Counties of the 25% Fund (Last Column)

Bernalillo	$ 444.44	Lincoln	$ 2,141.67	Santa Fe	1,091.93
Catron	13,009.81	McKinley	628.45	Sierra	1,424.87
Chavez	196.62	Mora	553.74	Socorro	5,058.69
Colfax	29.09	Otero	2,252.05	Taos	1,499.69
Eddy	654.80	Rio Arriba	6,100.96	Torrance	1,371.07
Grant	3,227.38	Sandoval	1,878.44	Valencia	488.10
Hidalgo	940.70	San Miguel	1,786.67	Total	$44,779.17

LIST OF FORESTRY SCHOOLS IN THE UNITED STATES
With Courses Leading To A Degree In Forestry
Approved by Society of American Foresters

University of California, Berkeley, California
Colorado State College, Fort Collins, Colorado
Duke University, Durham, North Carolina
University of Georgia, Athens, Georgia
Harvard University, Petersham, Massachusetts
University of Idaho, Moscow, Idaho
Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa
Louisiana State University, University, Louisiana
University of Maine, Orono, Maine
Michigan State College of Agriculture and Applied Science, East Lansing, Michigan
University of Michigan, Ann Arbor, Michigan
University of Minnesota, Saint Paul, Minnesota
Montana State University, Missoula, Montana
The New York State College of Forestry at Syracuse University, Syracuse, New York
North Carolina State College of Agriculture and Engineering, Raleigh, North Carolina
Oregon State Agricultural College, Corvallis, Oregon
The Pennsylvania State College, State College, Pennsylvania
Utah State Agricultural College, Logan, Utah
University of Washington, Seattle, Washington
Yale University, New Haven, Connecticut

HISTORY OF FORESTRY DEVELOPMENT IN THE UNITED STATES

1631 First sawmill at Berwick, Maine.
1640 First Ordinance governing timber use. (Exeter, N.H.)
1822 Dewitt Clinton, Governor of New York, pleaded for practice of conservation.
1828 Live oak and cedar reservations for Navy made in Louisiana. (19,000 acres)
1831 Timber cutting on public lands prohibited.
1849 Report of Patent Office urges conservation.
1867 Wisconsin appointed committee to report on effect of forest destruction.
1870 Census. Forest area canvassed.
1872 Governor Morton of Nebraska established Arbor Day.
1873 Forestry Committee of American Association for the Advancement of Science presented memorials to Congress, asking for the appointment of a commission of forestry.
Timber culture act.
1876 Congress established an "agency" on forestry in the Department of Agriculture. Dr. Franklin B. Hough appointed Commissioner of Forestry.
1877 Congress granted its first appropriation of $6,000 for the purpose of obtaining information preparatory to establishing a Division of Forestry.
1882 American Forestry Association started April 25 at Cincinnati.
1884 The duty of making experiments with timber was added to work of Division of Forestry.
1886 Division of Forestry in Department of Agriculture created.
1891 By Act of Congress, the President was given power to establish forest reservations.
President Harrison established the Yellowstone Park Timber Land Reserve to be under control of the Land Office.
1892 Pecos River Forest Reserve established in New Mexico.
1893 Grand Canyon Forest Reserve established in Arizona.
1896 Secretary of Interior requested the National Academy of Science to investigate and recommend a National Forest policy.
1897 By the Act of June 4, the forest reserves were put under administration and from this Act, with subsequent amendments, the forests are now being administered. The Land Office had charge of administration. The Division of Forestry gave technical advice. The U. S. Geological Survey was charged with surveying and mapping the forests.
1898 The Division of Forestry employed a total of six clerks and five scientific employees.
The first field work was done, which consisted of special investigation in connection with lumbering.
1901 The Division of Forestry was raised to the rank of Bureau but the change was in name only.
1905 By the Act of February 1, forestry work was consolidated and the forest reserves were transferred to the Department of Agriculture and the work of the Service as we know it today, started.
In July 1905, the Bureau of Forestry became the Forest Service.

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1907 The "forest reserves" were changed to National Forests in name to correct the impression that they were withdrawn from use.

1908 The direct administration of field work was transferred from Washington, D.C., to six district headquarters in the West; in 1914 a seventh district was established for the Appalachian region; in 1921 an eighth district was established in Alaska, and in 1929, a ninth district was set up for the Lake States.

1909 Between 1901 and 1909, President Roosevelt set aside over 148,000,000 acres of National Forests; there are now, as of June 30, 1940, 218,680,215 (gross) acres of National Forest land.

1911 By Act of March 1 (Weeks Law), acquisition of forest lands on headwaters of navigable streams east of Mississippi River made possible.

1922 General Forest Exchange Act authorizing exchange of lands in National Forests, cutting of timber in exchange for land, reservation of timber, etc., amended and extended 1923, 1926, 1928, 1929, 1935.

1924 The Reforestation Act (Clarke-McNary) was passed on June 7, greatly extending the scope of government cooperation in forestry.

1928 McNary-Woodruff Act was passed, authorizing appropriations of $2,000,000 for 1929 and $3,000,000 each for 1930 and 1931 for purchase of forest lands.

Forest Research Act (McNary-McSweeney) was passed, providing for a national forest research program on the part of seven governmental bureaus.

1930 Forest Service Districts became "Regions".

Secretary of Agriculture authorized to enlarge tree planting operations on National Forests.

Secretary of Agriculture authorized in cases of emergency to incur expense in search of persons lost in National Forests and in transporting persons seriously ill, injured or who may die within National Forests to nearest place where may be transferred to interested relatives or local authorities.

1935 Secretary of Agriculture authorized to cooperate with States in acquisition and administration of State Forests (Fulmer Act).

1936 Secretary of Agriculture authorized to maintain forest experiment stations throughout the United States.

1937 Secretary of Agriculture authorized to cooperate in development of farm forestry in States and Territories. (Norris-Doxey Act).

1938 Senate Concurrent Resolution No. 31 adopted June 13, 1938, creates a Joint Congressional Committee to study the forest situation in the United States.

1939 House Concurrent Resolution No. 11, March 31, 1939 continuing the Joint Committee on Forestry.